

ABSTRACT OF THE DISCLOSURE

5 A Microwave/Millimeter-wave Monolithic Integrated
Circuit (MMIC) device including PIN diode and Schottky
diode circuits that provides improved performance with a
reduced cost of manufacture. The planar, glass-
passivated, MMIC device is fabricated in silicon
technology and includes mesa isolation between the PIN
diode and the Schottky diode. The PIN and Schottky
diodes include respective anode regions having different
10 thicknesses and resistivity for implementing the PIN and
Schottky diode functions. Further, the Schottky anode
region is formed relatively late in a process for
fabricating the Si MMIC device to allow the Schottky
anode region to be formed in approximately the same plane
15 as the PIN anode region and to allow precise control of
the relative thicknesses of the PIN and Schottky anode
regions.

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